

FAQs – ECON PYROLYSIS FURNACE

Main difference compared to competitive products?

We use the activated carbon adsorber instead of a thermal after-burning unit for the gases produced. And because of the oil-lubricated vacuum pump our system does not require any process water. Only electrical power is needed to run the EPOs.

How often the activated carbon adsorber has to be changed?

It depends on the frequency of use and the amount of plastic that is on the parts. Normally, one to max. two times a year is enough.

How do you know, the activated carbon filter is saturated?

Practical approach: "When it stinks."

Or: Use the Dräger measuring system. We normally deliver this system with the tubes to measure the saturation of carbon monoxide and hydrocarbons (see "Dräger sensors.pdf"). But the limits for saturation have to be set by the customer. There can be different regulations per country or company.

How does the Dräger measuring system work?

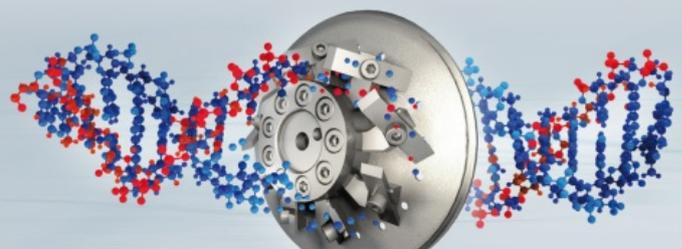
The tubes are delivered with a small pump. You have to break the ends of one tube, mount it to the pump and then the air coming from the activated carbon filter is sucked through the tube.

What are wear parts and how often they have to be exchanged?

- *Door seal: depending on use 1 – 3 times a year*
- *Steel wool for condensate tank: change depending on contamination - approx. every 10 cycles*
- *Activated carbon adsorber: Depending on use and amount of plastic: 1 – 2 times a year, change the complete barrel or only the contents of the barrel (2 pcs. fleece and activated carbon)*

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Why are PVC and fluoropolymers not suitable for the furnace?

Most important, the gases and acid produced during the cleaning cycle cannot be filtered by the activated carbon. And the acid will damage the steel and the vacuum pump.

How long does the cleaning take?

Approx. 8 – 10 hours (incl. cooling time) depending on time and temperature settings. Please note: Models EPO 1200 and bigger have heating elements with less power installed (to avoid burn-out). Therefore, the heat up time may take longer.

How much electrical power is consumed during a cleaning cycle?

The following values are meant for orientation and are not 100 % precise (according to TP Dec. 2014 and Feb. 2015 for a standard cycle at 400 V):

EPO 100	approx. 25 kWh
EPO 300	approx. 31 kWh
EPO 600	approx. 59 kWh
EPO 1200	approx. 92 kWh
EPO 1500	approx. 205 kWh
EPO 1800	approx. 350 kWh

What's important for regular maintenance?

- *empty the collecting tray after every cleaning cycle*
- *check the steel wool filter*
- *check filter and oil of the vacuum pump*

After the cleaning cycle, is it necessary to make any post-treatment of the parts?

There is only ash left. You can remove it by means of compressed air or water or just use a brush. Generally, the more time you choose for pyrolysis, the better will be the result (meaning the ash will be softer and easier to remove).

Just in case of PEEK or other high-temperature polymers, there will be still residues of plastic. Here, the plastic becomes brittle after a long time at max. temperature in the furnace and then it's possible to knock it off.

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